



ZAVOD ZA JAVNO ZDRAVSTVO FBiH
INSTITUTE FOR PUBLIC HEALTH FB&H



Prevention of Obesity in Europe – Consortium of the prevention of obesity through effective nutrition and physical activity actions – EURO-PREVOB

Tackling the social and economic determinants of nutrition and physical activity for the prevention of obesity across Europe

**Summary report on the pilot testing of the
EURO-PREVOB Policy Analysis Tool
in the South Eastern European Region**

by

Aida Filipović Hadžiomeragić

Joceline Pomerleau

Cécile Knai

Aileen Robertson

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Abstract

This report summarises the results of the pilot testing of the EURO-PREVOB Policy Analysis Tool in Bosnia and Herzegovina. The results are described in terms of policy analysis, the applicability, relevance and usefulness of the two main components of the Tool for South Eastern Europe, and the process evaluation, as it was an integral part of the pilot process.

List of abbreviations

The following abbreviations are used in this report:

BHAS	Agency for Statistics of Bosnia and Herzegovina
D	Deliverable
EA	Enumeration Areas
EC	European Commission
EU	European Union
EURO-PREVOB	Prevention of Obesity in Europe – Consortium for the prevention of obesity through effective nutrition and physical activity actions
F BH	Federation of Bosnia and Herzegovina
HFA	Health for All Indicators
HBS	Households Budget Survey
HBSC	Health Behaviour in School-aged Children (study)
IPH F BIH	Institute of Public Health of Federation of Bosnia and Herzegovina
MICS	Multiple Cluster Indicator Survey
SES	Socio Economic Status
SEE	South Eastern Europe
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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1. Introduction

Within the context of the EURO-PREVOB project, a Policy Analysis Tool was developed to enable public health researchers and decision-makers to assess on the one hand the extent of the policy response to obesity and related risk factors at national level, and on the other, selected indicators of obesogenic environments at the community level, using a common methodology.

Between the Autumn of 2008 and the Spring of 2009, the Tool was pilot-tested in five European countries chosen to represent five sub-regions of Europe, namely Bosnia and Herzegovina (South Eastern Europe - SEE), the Czech Republic (Central and Eastern Europe), France (Western Europe), Latvia (Nordic and Baltic countries) and Turkey (Southern Europe). Sub-regional working groups made up of stakeholders and experts were organised to review the results of the pilot tests and discuss the relevance and applicability of the Policy Analysis Tool for respective sub-regions. The principles and standardised methods according to which the pilot tests were carried out are described in detail in another EURO-PREVOB report entitled "Deliverable D5 – Report on the development and coordination of sub-regional analyses".

This report summarises the results of the "Report on the working group in the South Eastern European Region" (EURO-PREVOB Deliverable D10). The results are described in terms of the applicability, relevance and usefulness of the two main components of the Tool for South Eastern Europe, and the process evaluation, as it was an integral part of the pilot process.

1.1 Obesity prevalence and main risk factors for obesity

This section provides background information on the prevalence of obesity and selected risk factors for obesity in Bosnia and Herzegovina. However, it is important to note that in the country, data on nutritional status and obesity prevalence are collected mostly at the entity level¹ and are therefore not available at the national level. In addition, even at the entity level, data are not collected on a regular basis and statistics are unavailable for some population sub-groups such as school children and adolescents.

Adults – Results from a noncommunicable diseases risk factor survey conducted in 2002 in the F BH suggest that overweight and obesity are a major problem in the country. Indeed, 41% of adults were found to be overweight and 21% obese². The prevalence of obesity was considerably higher among females (25%) than among

¹ Bosnia and Herzegovina is administratively organised in two entities, the Federation of Bosnia and Herzegovina (F BH) and the Republika Srpska (RS). Since 1999, a third administrative area, District Brcko, has also been established. Entities have autonomy in the areas of internal affairs, economy and social policies, reconstruction and resettlement, defence, justice, tax and customs administration.

² Adult overweight and obesity are defined by using international cut-off points for BMI. BMI ≥ 25 kg/m² - overweight and BMI ≥ 30 kg/m² - obesity(1).

males (6.5%), whereas the proportion of overweight was higher among males (48.6%) than among females (36.1%) (1).

Young children – Excess body weight is also a cause for concern in children. A multiple cluster indicator survey conducted in 2006 on the whole territory of Bosnia and Herzegovina found that one in five (20.2%) children aged 0-5 years was overweight³ (2). In the F BH, the percentage of overweight 0-5 year-olds appears to have increased from 12% in 2000 (3) to 17.4% in 2006 (2).

Socioeconomic indicators – Socioeconomic factors increase vulnerability to health risks, including obesity. The per capita gross national income in Bosnia and Herzegovina was US\$ 6250 PPP in 2003 compared with an average of US\$ 6842 in the “Europe B sub-region”⁴ (WHO, HFA 2005)(4)). While the country’s adult literacy rate is high (99.6% (2)), the unemployment rate was 29% in 2007 (BHAS, 2007)(5) and the poverty rate remains considerable: it was 19.5% in 2001 (World Bank, 2005) and 20% in 2007, demonstrating that people in Bosnia and Herzegovina still live in relative poverty (BHAS 2007).

Dietary indicators - Information on dietary factors, which are mostly collected at the entity level (except for statistics on breastfeeding practices for which national data are available) suggest that some unhealthy eating practices could be an important risk factor for obesity in the country. Adults’ diets in the F BH are characterised by high consumption of red meat and fats, and by insufficient intake of fruit, vegetables and cereals (6): approximately one quarter of adults consume fresh fruit and vegetables more than once a day (7). In children, only 51.6% of boys and 59.8% of girls are reported to consume fruit on a daily basis, while 43.4% of boys and 48% of girls eat vegetables every day. School-aged children consume an estimated 37.3% and 49.6% of sugar-sweetened drinks and sweets respectively; these figures are among the highest in Europe (8, 9). With regards to infant feeding, statistics suggest that the rate of exclusive breastfeeding at 6 months in Bosnia and Herzegovina is 17.6%, the prevalence of continuous breastfeeding up to 15 months is 25.6%, and up to 23 months is 9.6% (2).

Physical inactivity indicators – Physical inactivity could also be contributing to the high prevalence of obesity in the country as only 15% of adults (19.6% of males and 12.0% of females) in F BH are reporting to be physically active more than once a week during leisure time. Available data suggest that only 31% of school-age children in F BH are physically active every day, and that 27.2% of children are classified as physically inactive. There are more physically inactive girls (33%) than boys (21.3%) (7).

³ Children under 5 year - Overweight above plus two standard deviations from median weight of height of reference population (WHO/CDC/NCHS) (2)

⁴ The “Europe B” sub-region, based on the WHO’s classification, is made of 16 countries with low mortality in both children and adults. These include Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Georgia, Kyrgyzstan, Poland, Romania, Serbia and Montenegro, Slovakia, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan and Uzbekistan. (4)

2. Methods

This section provides background information on the EURO-PREVOB Policy Analysis Tool and on the methods used for the pilot test in Bosnia and Herzegovina.

2.1 Description of the EURO-PREVOB Policy Analysis Tool

The EURO-PREVOB Policy Analysis Tool comprises two key components:

- 1) A **Policy Checklist** is a questionnaire designed to gather information on existing policies addressing: the national **food environment** (food production, food manufacturing, food trade, labelling of foods and beverages, food and beverage marketing and advertising, social welfare policy and health inequalities policy); **built environment** (urban planning, transport and road safety, active transport, sporting facilities, and leisure facilities); **maternal and child health services** (appropriate weight gain/loss for women during/after pregnancy, and infant and young child feeding and breastfeeding); and **schools** (school policies on nutrition and physical activity). The Policy Checklist was completed by trained fieldworkers via desk research and through contacts with selected experts and stakeholders when needed.
- 2) A **Community Questionnaire** is a rapid assessment of environmental indicators at the community level, designed to examine selected aspects of: the **food environment** (food environment of a given neighbourhood in terms of the number and types of available shops selling foods; cost and availability of indicative food items in selected grocery stores; marketing in and outside the grocery stores; nature and extent of television advertising during children's television hours; cost and marketing related to selected fast food items); and **built environment** (selected aspects of the built environment that are linked to physical activity, including the existence and quality of cycle lanes, parks, public transport stops, traffic volume, road crossings, pavements and level of unattractiveness). This questionnaire was completed by a pair of trained fieldworkers via direct observation of the community.

2.2 Pilot testing in Bosnia and Herzegovina

In Bosnia and Herzegovina, the pilot testing of the Policy Analysis Tool was organised by the local EURO-PREVOB Coordinator who oversaw fieldwork, process evaluation, sub-regional working group meeting, and report preparation. Each of these components is described below.

Fieldwork

Standardised data collection methods were used during the pilot. The Policy Checklist gathered data at the national level, while the Community Questionnaire focused on the city of Sarajevo (where the local coordinator was based). A pre-test took place in the summer of 2008. Ethical approval from the Scientific Committee of the Institute of Public Health of Federation of Bosnia and Herzegovina (IPH-FBH) was obtained prior to fieldwork.

The Policy Checklist was translated into the national language and completed by a trained medical doctor specialised in nutrition/hygiene (with an MSc in Public Health) under the supervision of the local coordinator. Data were gathered mainly through desk research using multiple sources of information including the published literature, Internet websites, and when required through contacts with experts, policy makers, and stakeholders (individually or in small groups). This approach helped identify policy documents that were not readily available via the Internet or via national departments and agencies dealing with the different areas covered by the Checklist. Data collection took place between 15 October 2008 and 25 February 2009 and took approximately 86 days.

Four fieldworkers were hired to pilot test the Community Questionnaire: a medical doctor working in public health; a postgraduate public health student; a graduate psychology student; and a graduate English language and literature student. All had experience in public health projects. They received a 5-day training session.

For the Community Questionnaire, areas of different socioeconomic or deprivation levels in the city of Sarajevo were selected. The sample selection was carried out with technical assistance from the Federal Office of Statistics in Sarajevo in 2008. Mr Fahrudin Memić, Assistant Director for Development, was the person responsible for sample selection. The selected sampling frame was the updated Master Sampling Frame used for the "MICS 3" survey in 2006 (for more information, see www.childinfo.org). A sample of 10 enumeration areas representing five different levels of expenditures within the Canton Sarajevo was produced.

In order to assess the inter-rater reliability of the Community Questionnaire, all data were collected by two independent pairs of trained fieldworkers who agreed, for each area, on a planned walking route prepared using the Google Earth Map software and/or detailed local maps. Observations gathered were coded into the questionnaire and on detailed maps of the area. Data collection was divided into four different sections:

(1) *Census of the shops selling foods in the selected areas*: In each area, fieldworkers gathered information on all shops selling food while following the planned walking route. The two pairs of fieldworkers then compared their results and tried to reach a consensus (going back to the field if necessary).

(2) *Food environment in the stores*: Fieldworkers randomly selected one small, one medium and one large grocery store in each area for in-depth assessment. Approval by the store manager was sought before data collection.

(3) *Marketing of foods and beverages during children television programmes*: Fieldworkers recorded and categorised the ads presented on one local television channel during children's television on a Saturday morning between 7:00 and 11:00, describing the type of product or service advertised, and whether a personality, role model, celebrity or cartoon was used during the ads.

(4) *Built environment*: Fieldworkers gathered information, in each selected area and using the agreed walking route, on the availability and quality of cycle lanes, public open spaces, public transport, traffic volume, safe road crossings, pavements, and level of attractiveness/unattractiveness (physical incivilities). Photos were taken to illustrate specific aspects of the built environment.

Process evaluation

Process evaluation was integrated into the pilot test to provide information on the pilot testing process, including how the tool was administered, how data were supplied, how long it took to complete data collection, and on any changes that had to be made during pilot work. Process evaluation data were obtained by means of diaries (kept by the local coordinators and fieldworkers from the planning phase until the end of pilot work), forms for tracking data collection, and questionnaires (gathering information on each step of the pilots).

Sub-regional working group meeting

One sub-regional meeting was held in Sarajevo on 5 March 2009 to disseminate the results of the pilot process and to obtain feedback, from regional experts and stakeholders from different sectors, on the relevance and applicability of the Policy Analysis Tool and on recommendations for changes to the Tool. Invited experts and stakeholders were, as far as possible, selected according to their relevance in implementing the Policy Analysis Tool in the future or in using the results collected. The 21 participants were from Bosnia and Herzegovina, Croatia, Serbia, Macedonia, Slovenia and England. They were mainly from the public sector, academia and intergovernmental organisations, and working in the areas of food and nutrition, health care and maternal and child health/breastfeeding. Results of the sub-regional working meetings contributed to the process evaluation of the Tool.



Participants at the EURO-PREVOB sub regional meeting for South Eastern Europe, Sarajevo

3. Results

3.1 Policy Checklist

Using the Policy Checklist, a total of 64 documents (10, 11–74) was retrieved (Table 1 below). Out of these: 39 documents had been adopted (60.1%); 30 documents focused on disadvantaged groups (46.9%); 10 documents focused on obesity (15.6%); 41 documents had information on State institutions or bodies responsible for supervision and implementation (64.1%); 19 documents had information on evaluation (29.7%); and 7 documents (10.9%) had information on monitoring. Information on the process of planned evaluation could not be found in any of the retrieved documents. The majority of retrieved documents were not policies but suggested laws or other types of documents that covered more than one policy area.

Table 1. Number of documents retrieved using Policy Checklist by policy area, focus on obesity and disadvantaged groups

Policy area	No. of documents retrieved	No. focused on obesity	No. focused on disadvantaged groups
Food environment	38	2	4
Built environment	16	5	16
Obesity/nutrition/physical activity policy documents	6	6	6
Maternal and young child services	7	6	7
School services	6	2	6

Full details of the Policy Checklist pilot test results in Bosnia and Herzegovina can be found in the report entitled "Deliverable D10 - Report on the working group in the South Eastern European Region" which will be available on EURO-PREVOB project's website – www.europrevob.eu (74).

Relevance, applicability and usefulness of the Policy Checklist

The specificities of the local context of Bosnia and Herzegovina were major constraints to the application of the Policy Checklist. These challenges include the complicated administrative structure of the country, the existence of national entity and cantonal level policies, limited internet access to documents and the absence of relevant published literature. A number of meetings and contacts with stakeholders was thus needed to gather the information required; altogether 48 stakeholders were contacted during the pilot testing of the Policy Checklist. However, the

complex bureaucratic procedures required for the meetings represented important challenges. Though most other South and Eastern European (SEE) countries may have more favourable circumstances (e.g. better internet access, national policies, the existence of published documents), it is expected that stakeholders would need to be consulted in these countries as well.

The information gathered was generally found to be easily transferable to the Policy Checklist, with a few exceptions. Though a record of many relevant laws and regulations and other types of documents was captured by the Policy Checklist, they were not necessarily structured to fit into the questionnaire and thus specific information was often less transferable. Also, in many cases information gathered was incomplete or too general and therefore subject to interpretation. This presents a constraint in terms of the transferability of such information.

Less easily available was information on whether relevant documents discussed disadvantaged groups and/or obesity, and on whether documents gave details on programmes' financial resources and monitoring systems. Most of the documents found did not focus on the prevention of obesity at all, and in some documents obesity was covered only in an indirect way, so it was not easy to decide whether these documents should be categorised as including or not a "focus on obesity"; therefore such information was found to be less transferable.

In spite of difficulties related to local conditions in Bosnia and Herzegovina and to the shortcomings of the Policy Checklist, we were able to obtain a detailed overview of existing policies from a wide range of national and entity sectors, on the state of their implementation, and differences between sectors in relation to the focus on obesity and on disadvantaged groups. Also, the Policy Checklist was able to capture the weaknesses of national and entity policies with regard the presence and implementation of monitoring systems. From the point of view of policy analysis, some sector-specific findings were particularly interesting; for example, we observed that fruit and vegetables have been exempted from VAT until 2005 when a unique form of VAT was applied to all food commodities. As well, a paradoxical situation regarding the adoption of the International Code of Marketing of Breastmilk Substitutes was recorded, i.e. the fact that the Code was adopted as a law in one entity of the country, but not in the other. We also observed that policies related to the school area are extremely poorly addressed, suggesting that intersectoral collaboration and action in the country is strongly needed. Some interesting links between the results of the Policy Checklist and those of the Community Questionnaire were also made as well. With regards to the built environment, for example, we observed that urban planning policies related to the construction of cycle lanes had not been implemented in the community as only two cycle lanes were observed during the survey. Also, the observation of few public open spaces and playgrounds does not correspond to the policies proposed.

The Policy Checklist covers a wide range of areas and provides a range of sector-specific information, allowing for an in-depth analysis of each sector; this is particularly relevant with regards to further sector-specific planning. For example, although advertising is seen as an area of great importance in terms of its role in influencing dietary habits, it was present only very modestly in the documents

retrieved with the Policy Checklist. This finding thus provides a justification for the establishment of independent policies to address this issue.

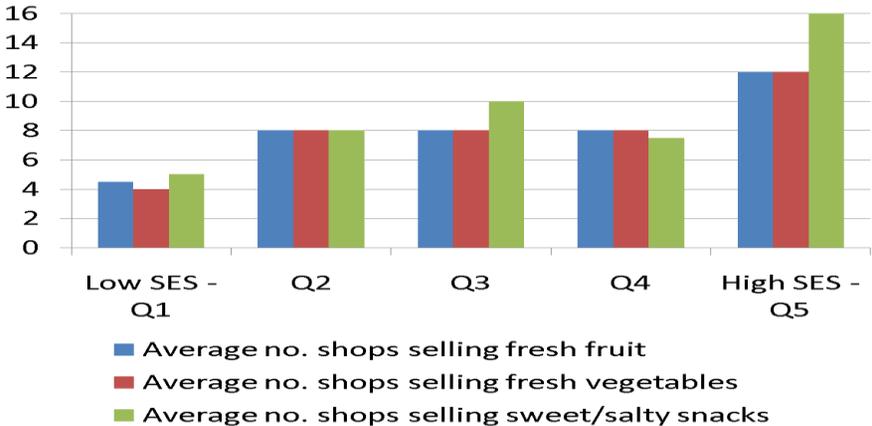
The information gathered with the Policy Checklist was therefore found to be highly relevant for the assessment of the policies on dietary intake, physical activity and obesity. It can contribute to better planning and targeting of future activities and inter-sectoral collaboration in the fight against obesity in Bosnia and Herzegovina and other countries in the sub-region. This is especially relevant for countries that do not have relevant actions plans or policies to address obesity. In the majority of SEE countries the Checklist could provide more or better quality information and would therefore be applicable, relevant and useful. The Policy Checklist was found to be an excellent tool for research purposes.

3.2 Community Questionnaire

Results from the pilot testing of the Community Questionnaire in Sarajevo suggest that it could be a useful tool to capture important contextual differences in markers of the obesogenicity of environments in areas of different socioeconomic status, describing both the food environment and the conduciveness to physical activity. Although no firm conclusion in terms of policy can be drawn from the information gathered during the pilot test because the number of areas examined was small (10 areas), the results described below illustrate examples of relationships that could be examined, in larger scale studies, between markers of the obesogenicity of the environments and socioeconomic status.

For example results from the pilot testing of the Community Questionnaire in Sarajevo suggest that the number of shops selling fresh fruit, fresh vegetables, but also sweets and salty snacks (Figure 1) may be rising with the increasing socioeconomic status of the areas surveyed.

Figure 1. Example of potential analyses based on information gathered with the Community Questionnaire - Number of shops selling selected food items in areas (approx. 0.25km²) of different socioeconomic levels in Sarajevo.



However, it appears that unhealthy aspects of the food environment (e.g. low availability of selected reduced fat and low-sugar products in grocery stores, ads for unhealthy snack foods or for sugary drinks outside the stores) are found in all areas regardless of the socioeconomic status of the areas. If this observation were confirmed in a larger study, it could suggest that the actions proposed in the policies retrieved using the Policy Checklist are not yet in place.

Advertisements on children's television showed few food-related advertisements, which is encouraging. However, only one channel was surveyed during the pilot test and it may not be typical of the general situation. A larger study could now be used to obtain more comprehensive findings that could be linked with the policies in place in the country.

No association was found between the different aspects of the built environment examined and socioeconomic status of the ten areas. Nevertheless, the availability and quality of public open spaces, playgrounds, road crossings and pavements in general were found to be low and thus not conducive to an active lifestyle. This is an important observation that should be explored in a future study.

Detailed results from the pilot testing of Community Questionnaire are presented in the report entitled "Deliverable D10 - Report on the working group in the South Eastern European Region" that is available at project's website (74) which will be available on the project website.

Relevance, applicability and usefulness of the Community Questionnaire

The Community Questionnaire managed to cover the relevant environmental indicators within each thematic section, and some links between the community results ("policy on the street") and the Policy Checklist findings ("policy in the book") could be made (see examples in Section 3.1.1), suggesting a potential for useful policy and community analysis if the Policy Analysis Tool is applied on a wider scale in the country. The questions were generally simple, and the methodology for fieldwork described in the manuals was clear, thus enabling efficient data collection regardless of the specificity of the areas examined. Most of the required information was readily available and easy to collect, proving the questionnaire to be applicable to the local context of Bosnia. The Community Questionnaire would most likely be easily useful and applicable in other countries of the SEE sub-region as the local context is similar.

Process evaluation of the Community Questionnaire included looking for the occurrence of discrepancies in the results obtained by the two pairs of fieldworkers in order to better spot eventual weaknesses of the questionnaire. These mainly had to do with the classification of restaurants in the food environment section of the Questionnaire, and the assessment of quality for selected items of the built environment section (e.g. public open spaces and evidence of attractiveness/unattractiveness).

4. Conclusions

The pilot testing of the EURO-PREVOB Policy Analysis Tool in Bosnia and Herzegovina, including process evaluation and the sub-regional working group meeting, was conducted successfully. The implications of the results in terms of policy analysis for the country were analysed, and the applicability, relevance and usefulness of the Policy Analysis Tool were examined in view of the both the national context and the SEE sub-regional context.

In general, the Policy Analysis Tool proved to be an applicable, useful and relevant tool for identifying policies related to nutrition, physical activity and obesity in Bosnia and Herzegovina where circumstances are highly country-specific; it is suggested that it may also be useful and possibly easier to use in more developed countries of the sub-region.

The Policy Checklist provided a detailed overview and inventory of policies that exist in a wide range of sectors relevant to obesity at both the national and entity levels in Bosnia and Herzegovina. It allowed for a useful insight into the weaknesses of national and entity policies with regards to their response to obesity and socioeconomic inequalities. Comparisons with other countries could offer a means of benchmarking the policy response to obesity across countries.

The Community Questionnaire was well structured and easily applicable, thus enabling efficient collection of data on environmental indicators at the community level, regardless of the specificity of the local context and of the socioeconomic level of the areas examined. The challenge will now be to use the Questionnaire on a larger scale so as to make policy-relevant observations about key modifiable factors linked with child and adult obesity rates, and with inequalities in obesity in Europe.

We believe that extensive dissemination of the pilot test results could enhance the use of the Policy Analysis Tool throughout Europe in the future. Conferences, seminars and scientific meetings are seen as most useful dissemination means. In the SEE sub-region in particular, fora such as the Meeting of SEE Food Safety and Nutrition Network of the Stability Pact Initiative, the Annual Meeting of SEE Nutrition Capacity Building Network and the WHO European Nutrition Counterpart Meeting have been recommended.

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